

REMARKS

Claims 7-24 are pending in the present application. In the Office Action, claims 7-24 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over admitted prior art in view of Mizikovsky, et al (U.S. Patent No. 5,794,139). The Examiner's rejections are respectfully traversed.

With regard to independent claims 7 and 16, Applicants describe and claim methods of authenticating a user identity module communicatively coupled with a mobile shell having an established security association with a server network. In the embodiment set forth in claim 7, Applicants describe and claim receiving a first message from the mobile shell, determining a second message based upon the first message and a first key known to the server network and unknown to the mobile shell, and providing the second message to the server network. In the embodiment set forth in claim 16, Applicants describe and claim establishing a security association with the mobile shell, receiving a first message from the mobile shell, and authenticating the mobile shell based upon the first message and a first key known to the user identity module and unknown to the mobile shell.

In the Office Action, the Examiner alleges that the admitted prior art teaches a challenge/response scheme that uses a random number generated by a network server and a secret key known by a server network and a user identity module but unknown to a mobile shell. However, as admitted by the Examiner, the admitted prior art fails to teach or suggest authenticating a mobile shell once a security association exists between the mobile shell and a server network. Thus, the Examiner relies upon Mizikovsky to teach a challenge/response scheme that periodically authenticates a mobile station to a server network and alleges that it would have been obvious to modify the admitted prior art to arrive at Applicants' claimed

invention, i.e. authenticating the mobile shell having an established security association with the server network based upon the first message and a first key known to the user identity module and unknown to the mobile shell. Applicants respectfully disagree.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Applicants respectfully submit that neither the admitted prior art nor Mizikovsky provide any suggestion or motivation to modify the prior art to arrive at Applicants' claimed invention. To the contrary, the admitted prior art and Mizikovsky both appear to teach away from the Examiner's proposed modifications. First, the admitted prior art teaches that once a security association has been established between a base station 104 and a mobile unit 108, the mobile 108 and the base station 104 encrypt information using a ciphering key, CK, and authenticate information using an integrity key, IK. Both the ciphering and the integrity keys are known to the mobile 108 and the base station 104. See Patent Application, page 6, ll. 20-25. Second, Mizikovsky is concerned with automatically generating an authentication key in a mobile station. Mizikovsky also teaches that the mobile station generates a unique challenge response based upon the authentication key that is generated by, and therefore known to, the mobile station. Thus, the admitted prior art and Mizikovsky both appear to teach away from authenticating the mobile shell having an established security association with a server network based upon the first message and a first key known to the user identity module and unknown to the mobile shell. It is by now well established that teaching away by the prior art constitutes *prima facie* evidence that the claimed invention is not obvious.

For at least the aforementioned reasons, Applicants respectfully submit that claims 7, 16, and all claims depending therefrom are not obvious over the admitted prior art in view of Mizikovsky. Applicants request that the Examiner's rejections of these claims be withdrawn.

For the aforementioned reasons, it is respectfully submitted that all claims pending in the present application are in condition for allowance. The Examiner is invited to contact the undersigned at (713) 934-4052 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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